DETERMINANTS INFLUENCING THE IMPLEMENTATION OF ENTERPRISE RISK MANAGEMENT IN THE NIGERIAN BANKING SECTOR

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ABSTRACT

Enterprise risk management (ERM) is an organized, dependable and reproducible process across the entire system for identifying, measuring, controlling and reporting of opportunities and threats that could impact on the objectives of the organization. The purpose of this study is to empirically examine the extent of ERM implementation in the Nigerian banking sector and the identification of antecedents influencing the adoption. 722 questionnaires were administered to top, middle and lower level managers across 361branches and the headquarters of the respective 21banks. The respondents consist of the staff of the risk management, internal audit and operational departments at both the headquarters and branches of the banks. Both SPSS Software and logistic regression model were used for data analysis. The finding reveals that there is plausible evidence that there is an ERM complete in place in most of the banks while insignificant number indicated ERM partial in place. Furthermore, the finding also indicates that internal audit effectiveness, human resource competency, Regulatory influence and top management commitment were statistically positively significant to the stage of ERM implementation while board characteristic was negatively significant. However, most of the banks had already gone through the ERM process before the CBN mandate. This study provides a new knowledge of the literature on the antecedents of ERM adoption. Similarly, the finding has a policy implication for the board of directors to improve their oversight functions and the regulatory authorities entrench risk based supervision on all policy issues. Future research is therefore, advocated on the effectiveness and impact of ERM systems after implementation using different variables and using board members and top management as respondents.

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Keywords: Implementation antecedents, Enterprise risk management, Nigerian banking sector, Logistic regression model, Shareholder value, Bank performance, Agency theory.

1. INTRODUCTION

Enterprise risk management (ERM) has occupied an important position on the agenda of the international business community. It has been raised to the top agenda of the business world because it enhances organizational performance and creates value for shareholders (Gates *et al.*, 2012; Chisasa and Young, 2013).

The process of identifying, prioritizing and treating risks has been a usual practice among businesses (Jalal-Karim, 2013). The principal actions of the ERM process involve, risk identification, risk assessment, risk management, and risk control of all cases or situations (Ciocoiu *et al.*, 2009; Beasley *et al.*, 2010). Enterprise risk management is designed to enhance top management's capacity to control the whole portfolio of risks facing the organization (Beasley *et al.*, 2006). It further provides an important source of competitive advantage, exhibiting a strong risk management competency and power for enhancing shareholder value (Jalal-Karim, 2013). Threat and opportunity management are the key ingredients of the risk management process (Hillson, 2002).

Enterprise risk management is an organized, reliable and consistent process across the whole entity for identifying, evaluating, manipulating and reporting on opportunities and threats that impact on the attainment of organization's objective (Lam, 2000; Barton *et al.*, 2002). Hoyt and Liebenberg (2011) suggest that ERM is the same with, enterprise-wide risk management (EWRM), integrated risk management (IRM), holistic risk management (HRM), business risk management (BRM) and strategic risk management (SRM). For consistency, the researcher used the acronym ERM throughout the paper. The impact of the global financial crisis has publicized the relevance of ERM (Coskun, 2013). The ERM importance is attributed to the dynamic business environment characterized by threats from political, economic, terrorist threats, natural, and technical resources (Wu and Olson, 2010). Numerous studies document that ERM is needed for high level corporate governance (Hassan Al-Tamimi and Mohammed Al-Mazrooei, 2007). The practices of corporate administration and risk management are interdependently and closely connected together because they enhance the monitoring capacity and capability of the board of directors (Manab *et al.*, 2010; Daud *et al.*, 2011).

Tillinghast-Towers Perrin (2002) suggest that the application of an ERM framework, particularly in the initial stage of implementation requires substantial financial support and commitment from the board of directors and top management. The ERM implementation has an impact on the internal audit functions (Beasley *et al.*, 2006). The new internal auditor's standards have switched the rule from a control based internal auditing to a risk based internal auditing (Institute of Internal Auditors (IIA), 2004). The new rules include risk assessment, control environment, data management and communications, and risk monitoring (IIA, 2004; Beasley *et al.*, 2006)**.** The recent huge company collapse, corporate scandals, and other external and internal factors, coupled with the lack of confidence by investors and creditors in financial reporting, are the main reasons which become strong motivating factors for strengthening and enhancing corporate governance and the adoption of ERM across industries (Kleffner *et al.*, 2003a; Lam, 2014). Therefore, ERM has now become an important issue for the business, industries and the academia, broader in scope and have been included in corporate philosophy (Kleffner *et al.*,

2003a). The goal of ERM is to preserve and enhance shareholder value (Gordon *et al.*, 2009; Manab *et al.*, 2010; Hoyt and Liebenberg, 2011).

Despite the increasing importance of ERM practice, there is a notable lack of empirical evidence on the extent of ERM implementation in the Nigerian banking sector. In literature, there are limited studies that examine the antecedents for ERM implementation (Liebenberg and Hoyt, 2003;2011; Adeleye *et al.*, 2004; Beasley *et al.*, 2005; KPMG International, 2006; Altuntas *et al.*, 2011; Pagach and Warr, 2011; Golshan and Rasid, 2012; Önder and Ergin, 2012; Jalal-Karim, 2013). However, most of these studies were conducted in developed countries and emerging economies, leaving the developing countries far behind, particularly, Nigeria.

There is a paucity of research on the extent of ERM implementation in Nigeria and the antecedents that influence the ERM implementation. Still, there are only few studies on risk management practices found in the literature. Lamentably, all the studies empirically failed to examine the extent of ERM implementation in the Nigerian banking sector. Various studies (Adeleye *et al.*, 2004; Owojori *et al.*, 2011; Kolapo *et al.*, 2012; Njogo, 2012; Fadun, 2013; Dabari and Saidin, 2014; Ajibo, 2015) have been conducted on risk management practices in Nigeria. Nevertheless, some of these works were either conceptual in context or focus in other areas/ industries. Soyemi *et al.* (2014) analyse the risk management practices in Nigerian commercial banks, relating these practices to their yearly financial performance for 2012 fiscal year. The finding reveals that risk management is positively linked to the bank's financial performance.

The need for ERM intensity is strongly supported by the CBN (2012) who maintains that risk management is still at its rudimentary stage in Nigeria and is bedevilled by a number of challenges. These challenges include poor knowledge of risk management by members of the board of many banks and lack of professionals and ineffective monitoring mechanism. Others are; lack of risk training and education and lack of a framework that supports the development of skilled and capable workers in the industry (Sanusi, 2011;2010). The CBN's had issued a Guideline for the "Development of Risk Management Frameworks for Individual Risk Elements" by a circular No. (Ref BSD/DIR/CIR/VI/011) in 2011, which required all commercial banks operating in Nigeria to put in place adequate policies, which is sanctioned by the board of directors, for the management and mitigation of their risk exposures.

In the last few years, several financial institutions become bankrupt, not merely because of risk management, but also because of failures of monitoring systems and weak internal control due to weak board of directors and ineffective top management (CBN Deputy Governor, 2011;2012). An AMB country risk report (2014), describe Nigeria, as a CRT-5 country, with moderate economic risk and critical political and financial system risk. Nevertheless, the majority of the other countries in Sub-Saharan Africa are also considered as CRT-5, with the exceptions of South Africa at CRT-3 and Mauritius at CRT-4. Sanusi (2010) suggest that in the last few years, excessive credits and unwarranted growth in financial asset went unchecked, thus, managing risk is not an option but a necessity for the Nigerian commercial banks.

Therefore, the main aim of this research is to empirically test the extent of ERM implementation in the Nigerian banking sector, and also, to identify the antecedents that influence ERM implementation. However, this is the first known empirical research to the researcher's

knowledge that has studied the extent of ERM implementation in the Nigerian banking sector and further examine the relationship between regulatory influence, internal audit effectiveness, human resource competency, top management commitment and board characteristics and the stage of ERM implementation in the Nigerian banks. To this end, this is the first known empirical research that examined this set of combination of variables in this context in relation to ERM implementation in the Nigerian banking sector.

The next part of the paper is organised into sections. The first section reviews the literature and hypotheses development, followed by methodology which describes the research design and the data collection process. The next is result and discussion section, and then, conclusion

2. LITERATURE REVIEW

Central banks conduct oversight functions over the commercial banking system of their respective countries. All banks are licensed by the Central Bank of Nigeria (CBN) and incorporated under the companies and Allied Matters Act of 1990 as amended 2004. The CBN is the regulatory authority responsible for regulating the activities of all banks and other financial institutions and had issued the Corporate Governance Code for Banks in 2006 and a revised version in 2012. The CBN further issued a Guideline for the Development of Risk Management Frameworks for Individual Risk essentials vide circular no. (Ref BSD/DIR/CIR/VI/011) in 2011. By this, banks were required to put in place risk management structures and process with emphasis on the roles of the board, board risk management committee, and top management as well as establishing risk management systems for individual risk elements. The agency theory stresses the resolution of conflict of interests between the principal (shareholders) and the agents (managers) by enhancing monitoring mechanism such as board of directors and internal auditors. This is to enable the commercial enterprise to reach its end of improving performance and invariably increases value for shareholders (Jensen and Meckling, 1976; Jensen, 1993; Nocco and Stulz, 2006).

Based on the latent literature, there are many definitions of risk management (Colquitt *et al.*, 1999; Lam, 2000; D'arcy and Brogan, 2001; Dickinson, 2001). Nevertheless, the definition by COSO (2004) is more common and serves as a reference point for ERM adoption and deployment. The Committee of Sponsoring Organizations of the Tread way Commission COSO (2004) defines ERM as:

> " Process, effected by an entity's board of directors, management and other personnel, in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance of entity objectives" (p. 2).

The study by Owojori *et al.* (2011) of risk management practices in Nigerian banks after the consolidation identified the most important types of risks faced by banks as credit risks, reputation risks, liquidity risk, legal risk, operational risk, customer satisfaction risk, information security risk and leadership risk. Other cases of risks are; regulatory risk, job risk, government policy risk, market risk, sovereign risk, competition risk, human resource risk and fraud risk. These risks pose serious threats to banks objective (Casualty Actuarial Society, 2003; Razali and Tahir, 2011). Enterprise Risk Management also exists in the planning, leading, managing and organizing

activities that could mitigate significant risks associated with financial risk, operational risks, and strategic risks (Cassidy, 2005). Jablonowski (2006) assert that the application of ERM assists the firms to manage better financial results which are consistent with Lam (2000) who advocate that the ERM implementation influences should be examined in the light of three perspectives, thus, globalization, regulation and the changing role of the top management as well as the auditors. Generally, it is argued that the adoption and integration of an ERM process will improve organizational performance and enhance shareholder value (COSO, 2004; Nocco and Stulz, 2006; Hoyt and Liebenberg, 2008; Manab *et al.*, 2010; Lam, 2014).

2.1. Stage of ERM Implementation in the Nigerian Banks

Chisasa and Young (2013) examined the implementation and status of operational risk management in developing markets in relation to Basel 11, using 22 employees of the South African commercial bank in order to assess the level of staff preparedness for the implementation of ERM. The results show a lack of knowledge in assembly of risk information, information security management and the implementation of risk models. Njogo (2012) examined risk management practices in the banking sector of Nigeria and document that the Banking sector is a highly controlled industry with a high degree of leverage that is associated to high risk and, thus, involves a high level of risk management exercises. However, the author failed to empirically examine the antecedents of ERM implementation in the Nigerian banks.

A survey conducted by Mikes (2009) on the risk management exercises in two banks for the period of 2001-2005; shows that both banks had developed risk management methods but only one bank has embraced a modern ERM. Similarly, Ernst and Young (2010) carried a survey of top management of almost 40 international banks on risk governance and find that only 14% of the respondents suggested they have a holistic survey of risk across their respective organisations. The practitioners opined that the majority of banks have no enterprise-wide view of risk management practices. This study was conducted in a developed country, leaving developing countries behind. On the other hand, Yegon *et al.* (2014) find top management support and commitment, resource endowment and risk attitude as the main factors that influence implementation of risk management in an organisation. Beasley *et al.* (2005) examined factors associated with the extent of ERM implementation of a diverse US and international organisations. The findings reveal that the stage of ERM implementation is positively associated with the presence of a chief risk officer, top management apparent support for ERM, board independence, the presence of a Big Four auditor, entity size, and entities in the banking, education, and insurance industries. Additionally, in a survey conducted by Beasley *et al.* (2010) on the stage of ERM implementation, the finding reveals that 44% of the respondents did not sustain an enterprise-wide risk management operation in place and they had no plans to carry out.

2.2. Determinants of ERM Implementation in the Nigerian Banks
2.2.1. Internal Audit Effectiveness

Internal audit effectiveness has a great role to play in ERM because it boosts continuous improvement in the organizations (Badara and Saidin, 2014). Beasley *et al.* (2006) note that ERM

has an impact on the internal audit function and, such impact is greater when the organisation has ERM complete in place. H1: There is a positive relationship between internal audit effectiveness and the stage of risk management implementation.

2.2.2. Human Resource Competency

Current trends in the application of human resource management places high value on the human resource competency, especially its use in improving effective job performance, which enhances organizational competitiveness (Cardy and Selvarajan, 2006). Competency level of the board of directors and top management will enable them to exploit opportunities and minimize threats associated with risks for the benefit of the bank particularly enhancing competitive advantage. H2: There is a positive relationship between human resource competency and the stage of risk management implementation.

2.2.3. Regulatory Influence Support

The firm`s decision to implement ERM is influenced by outside elements such as corporate governance, laws and regulatory compliance. According to Pricewaterhouse Coopers (2004) the consolidation of corporate administration, risk management and compliance is necessarily applicable to achieving the aims of the clientele and enhance shareholder value. H3: There is a positive relationship between regulatory influence support and the stage of risk management implementation.

2.2.4. Top Management Commitment

The implementation of ERM in organisations, particularly banks, mainly depends on the backing and dedication of the leadership (Manab and Kassim, 2012). Beasley *et al.* (2005) argue that top management support and commitment are very necessary and relevant for the successful execution of the ERM programmes. The top management commitment and financial backing are also required, especially towards effective provision of resources, social system and founding of a risk management culture which enhances implementation. H4: There is a positive relationship between top management commitment and the stage of risk management implementation.

2.2.5. Board Characteristics

The boards of directors are governing bodies that serve important functions for organizations, ranging from monitoring, managing on behalf of different shareholders, and to providing resources. The board of directors has the responsibility for oversight functions which include monitoring and supervision, particularly the risk management systems. Kleffner *et al.* (2003a) reported that the characteristics of organizations differ in their level of ERM adoption in Canada. H5: There is a positive relationship between board characteristics and the stage of risk management implementation.

3. METHODOLOGY

The study used a quantitative approach using survey by collecting cross sectional data through a questionnaire. The questionnaire was pre-examined by five experts, including three staff members and two practitioners to establish the content validity while face validity was conducted with a focus group of nine bankers in Yola. A pilot test was further conducted using a sample of seventy three respondents in Yola and Jalingo which were not part of the primary areas of data collection. All the independent variables were continuous on 5 Like-scale while the dependent variable was a categorical variable. This was the justification for the use of logistic regression as a technique of data analysis.

The questionnaires were administered to the staff of risk management department, internal audit and other departments of the twenty one (21) commercial (Money Deposit Banks, MDB) banks in Nigeria (CBN, 2012). The questionnaire was administered to the staff of the various banks in three hundred and sixty one (361) branches across the country and the respective headquarters of the banks through drop and pick procedure with the help of research assistants engaged by the researcher. The questionnaires were administered in eight cities (Abuja, Kano, Kaduna, Lagos, Jos, Port Harcourt, Enugu & Bauchi) across the six geopolitical zones of Nigeria. The Data was keyed into SPSS version 20 for further analysis. SPSS was used for data screening and preliminary analysis, while Logistic regression was applied for the remaining multivariate analysis.

3.1. Research Model

The logit model for this study is:

$$ln \frac{SERM}{(1-SERM)} = \alpha_0 + \beta_1 RIS_{it} + \beta_2 IAE_{it} + \beta_3 HRC_{it} + \beta_4 TMC_{it} + \beta_5 BCS_{it}.$$

Where:

SERM= Stage of Enterprise Risk Management Implementation; IAE=Internal Audit Effectiveness; HRC=Human Resource Competency; RIS=Regulatory Influence Support, TMC=Top Management commitment and BCS=Board characteristics. The categorical dependent variable, STAGE of ERM IMPLEMENTATION, reflects a dummy variable. Value of 1 or 0 as follows: ERM stage of implementation = 1, if ERM is completely in place; ERM stage of implementation = 0, if ERM is partially in place. The independent variables are all continuous variables measured by 5-Likert scale of 1=strongly disagree to 5= strongly agree.

4. RESULT AND DISCUSSION

4.1. Questionnaire Administration

Seven hundred and twenty two (722) questionnaires were circulated to the commercial (MDBS) banks in order to obtain a high response rate. 435 questionnaires representing 60% were found usable while 62 questionnaires were rejected for analysis due to incomplete filling or lack of proper completion/outliers. Nakpodia *et al.* (2007) suggest that a response rate for a survey research in Nigeria is 45-73%. However, Hair (2010) argues that a response rate of 30% is sufficient for a survey. A non-response bias was calculated. Both the descriptive test and Levene's test for equality of variance were done on the demographic and continuous variables. The

determination of the descriptive test did not indicate any significant statistical differences between (Early and Late) respondents' demographic characteristics.

4.2. The Respondent's Demographic Profile

From the descriptive statistics, 62% of the respondents were male, while 38% were female. Most of the respondents are between the ages of 31-40 years old having 53% which is the highest. With respect to the category of the respondents, Top management was 4%, followed by middle level management with 34% and finally, lower level management represent 62%. At the departmental level, risk management/internal control represent 27%, internal audit has 22%, while lastly, and other departments represent 51%. It has been discovered that risk management staff were classified as an internal control in some banks, especially in the zone/area/regional offices.

The highest rank (position) of respondents is the Board Committee Members which have the least of 1%, while the highest is the other category of staff such as officer's cadre representing 35%. These percentages may not be unconnected with the difficulty in getting access to the top level management in the banking sector and in most cases; the branch operational staff consist of officers and managers. With regard to working experience, the preliminary analysis revealed that 25% of the respondents have working experience from 1-5 years, and 34% of the respondents have working experience of 10 years and above. The preliminary analysis revealed that 96% of the respondents are highly educated with Bachelor Degrees and above. Forty six (46) percent of the respondents concurred that they belonged to professional bodies while 54% do not. The respondents were members of different accounting professional bodies.

4.3. The Banks Background Statistics

The majority of the respondents agreed that their banks have been in existence for 21years and above representing 69%, while others agreed that their banks range between 16-20 years old representing 5%. With respect to listing on the Nigerian Stock Exchange (NSE), 92% said "yes" while only 8% said "no". The presence of chief risk officer (CRO) attracted 98% of the respondents which shows the extent of ERM implementation in the Nigerian banks. The big four (Big4) auditors represents 65%, while non big4 scored 35%. In terms of bank total assets, most of the respondents indicated that their asset base is between 76-100 Billion Naira representing 43%, while others agreed that it ranges from 101 Billion Naira and above representing 36%. The respondents argued that the number of branches is 121 and above which represents 92%.

4.4. Stage of ERM Implementation

The percentage of ERM complete in place was 89%, while ERM partial in place represent 11%. This shows that there is a significant level of compliance with the CBN directive on ERM implementation. Nevertheless, such implementation could be partial or complete as it was mandatory for every bank to implement ERM (CBN Deputy Governor, 2011;2012). This study is actually an extension of the studies by (Kleffner *et al.*, 2003a; Beasley *et al.*, 2005; Paape and Speklè, 2011; Manab and Kassim, 2012; Fadun, 2013; Dabari and Saidin, 2014). In order to sustain the relationship, the stage of ERM implementation was maintained as the dependent variable.

4.5. Descriptive Statistics of the Independent Variables

As regards the independent variables, the mean values range from 4.13 to 4.42 with the lowest Standard deviation below 1 which is .666 and the highest is .941. The minimum score is 1 and the maximum score is 5 for all the variables. These have met the basic requirement for further multivariate analysis.

4.6. Multicollinearity

Tables 1 and 2 below show the results of the logistic regression model that present the tests of collinearity, multicollinearity, the VIF and Tolerance of the study. To detect multicollinearity in this study, Pearson correlation of SPSS was employed as shown in Table 1. Examining table 1 below, it is obvious that there is no variable that is highly correlated with one another. In view of the fact that the correlation values are well below the threshold of 0.9, it can be concluded that there is no multicollinearity problem among the variables under investigation. The VIF is below the threshold of 5 and tolerance is above .20 which is acceptable.

Table-1. Correlation

Construct	1	2	3	4	5	6
Board characteristics support (BCS)	1					
Internal audit effectiveness (IAE)	-.051	1				
Human resource competency (HRC)	-.157	-.126	1			
Top management commitment (TMC)	-068	-.063	-.112	1		
Regulatory influence support (RIS)	-.242	-.164	-.142	-.223	-	1

Table-2. multi Colllinearity Test

Construct	Coding	Tolerance	VIF
Internal audit effectiveness	(IAE)	.754	1.327
Human resource competency	(HRC)	.804	1.244
Top management commitment	(TMC)	.749	1.335
Regulatory influence support	(RIS)	.591	1.691
Board characteristic support	(BCS)	.663	1.508

4.7. Logistic Regression Analysis

Table 3 reflects the result of the logistic regression analysis performed to measure the influence of antecedents on the stage of ERM implementation in the banking sector using the independent variables (IAE, HRC, RIS, TMC and BCS). While analysing the table 3 below, the overall percentage of classification is 89%. This means that correct groupings were assigned accordingly. The Omnibus Tests of Model Coefficients indicating p-value of Chi-square test statistics prove that the model was statistically significant with step, block and model are the same at 23.884 Chi-square. The -2 likelihood for this study is 282.362 while the value of Nagelkerke-R^2 is 0.189 and, Cox and Snell R Square is 0.096 for the logistic regression. This is further validated with the result of Hosmer and Lemeshow test that show the general significance level of the model which was found to be 0.736 which is above the critical value of α=0. 05. Hence, there is in fact no effect of the independent variables, taken together, on the dependent variable. In this wise, the

model is statistically significant at p-value less than 1%. Therefore, the models goodness of fit has been achieved.

Tabble-3. Tests for Goodness of Fit of the model

Tests	Results
No. of cases (N)	435
Model Chi-Square (R^2)	P-value=.000
Cox & Snell R Square	.096
Nagelkerke R Square	.189
Hosmer and Lemeshow Test	p-value=.736
Percentage of correct prediction	89%

The logistic regression results in table 4 indicate the p-values of the variables in the mode,l showing significance level at 5% and 10%. Therefore, the overall model is statistically significant. The independent variables in the model such as IAE, HRC, RIS and TMC are statistically positively significant and are more likely to influence the stage of ERM implementation while BCS is negatively significant. The implication for BCS is that an increase in the BCS will decrease the level of ERM implementation. This suggests that the factors influencing the stage of ERM implementation can only be explained by the predictor variables under investigation by 18.9% only. The logistic regression result in table 4 below indicates that IAE, HRC, TMC, RIS and BCS are statistically significant at p-value of 0.05. However, BCS is negatively significant at p-value of 0.05. It also finds that there was ERM complete in place in the banks, which scored 89% of the respondents, while ERM partial in place was only 11 percent.

Table-4. Logistic regression Result.

Construct	Coefficient	S.E.	Sig.
Internal audit effectiveness	.376	.174	.030**
Regulatory influence support	.458	.180	.011**
Top management commitment	.458	.180	.011**
Board characteristics support	-.574	.277	.038**
Human resource competency	.390	.165	.018**
Constant	-.605	.988	.540

**Significant at 5%

4.8. Discussion and Implication

From the logistic regression result, there is plausible evidence that there is ERM complete in place in the Nigerian banks because greater percentage of the respondents agreed that their banks have ERM fully in place. This is in conformity with the CBN mandate. Furthermore, there is a positive significant relationship between IAE, RIS, TMC and HRC and the stage of ERM implementation while the board characteristics have a negative relationship with the stage of ERM implementation. Therefore, IAE, HRC, RIS and TMC positively support the hypotheses (1- 4) while the BCS do not supports the hypothesis (5).

Several studies (Liebenberg and Hoyt, 2003; Kleffner *et al.*, 2003a; Beasley *et al.*, 2005; Paape and Speklè, 2011; Manab and Kassim, 2012) used many and varied antecedents to examine

the extent of ERM implementation, but none used internal audit effectiveness and human resource competency. Nevertheless, writers (Beasley *et al.*, 2005; Manab and Kassim, 2012) have used regulatory influence and top management commitment and leadership respectively to determine the components linked up with the extent of ERM implementation. Thus: to the researcher best knowledge, this is the first time that this set of combination of variables are being examined collectively in the same setting. Nevertheless, the implication of the negative relationship between the board characteristics and the stage of ERM implementation is that a unit increase in BCS oversight activities reduces the likelihood of   ERM implementation. This, however, negates the agency theory. In any case, there are several studies (Lasfer, 2006; Golshan and Rasid, 2012) that find a negative relationship between some elements of the board of directors, particularly corporate governance mechanisms such as ERM process.

This is in accordance with the findings of Kleffner *et al.* (2003a). These findings are supported by the CBN action in 2005, which sacked the board of directors and top management of some commercial banks and appointed interim management due to failing in oversight functions and corruption (Sanusi, 2010; Owojori *et al.*, 2011). This also explains the possible causes of the negative significant relationship between the board characteristics and the stage of ERM implementation. Consequently, the finding is significant to the regulatory authorities that demand to ensure risk based regulations and oversight functions as advocated by Ajibo (2015) and Fadun (2013).

5. CONCLUSION

This study is one of very few studies which have investigated the relationship between internal audit effectiveness, human resource competency, regulatory influence, top management commitment and board characteristics and the stage of ERM implementation in the Nigerian banking sector. The paper's primary contribution is finding that internal audit effectiveness, human resource competency, regulatory influence and top management commitment significantly influence the implementation of ERM in the Nigerian banking sector while board characteristics do not influence ERM implementation. The paper further contributes to finding that there is ERM complete in place in most of the banks while insignificant number indicated ERM partial in place. This study contributes to the existing literature a new knowledge on the antecedents of ERM implementation. The findings of this research has significance for the regulatory authorities to re-assess its supervisory role with the perspective of strengthening the ERM process in the commercial banks and ensure full and efficient implementation of ERM in all the Nigerian banks irrespective of their status. On the other hand, the academic community is easily placed to significantly contribute to this increasing public policy requirement and debate for more effective enterprise risk management and corporate administration.

6. ACKNOWLEDGEMENT

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